Healthy Approaches to Weight Loss

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Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults

≥55% energy from carbohydrate
≤30% energy from fat
and approximately 15% energy from protein

≥55% energy from carbohydrate
≤30% energy from fat
and approximately 15% energy from protein

Change in percent body weight

<table>
<thead>
<tr>
<th>Months</th>
<th>Low-fat</th>
<th>Low-carb</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>1</td>
<td></td>
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Brehm, JCEM 2003;88(4):1617-1623

Yancy, Ann Int Med 2004;140:769-777

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Foster et al, NEJM 2003;348:2082-90

Randomized
n=27
n=26
Completed
n=20 (74%)
n=22 (85%)

n=60
n=59
Completed
n=34 (57%)
n=45 (76%)

Low carb → High carb

Low carb

Low-fat

Low-carb

p<0.001

p<0.001
A Weight Loss Diet Study

From Low-Carb to High Carb

Percent weight change across time, by group

12-month net weight change (kg): Individual results

Gardner et al. JAMA 2007;297:969-77

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Dietary Macronutrients

Carbohydrates
- Amount
- Calories
- Carbs (g)
- Fiber

1 slice
- Whole wheat
- Calories: ~120
- Carbs: ~20
- Fiber: ~4 g

1 slice
- Whole, enriched
- Calories: ~120
- Carbs: ~20
- Fiber: ~1 g

Fats
- Amount
- Calories
- Fat (g)
- Sat Fat (g)
- Omega-3 (g)
- Protein (g)
- Fiber (g)

- ~1
- ~350
- ~35
- ~5
- 0
- ~6
- ~11

- ~2 ozs
- ~350
- ~36
- ~3.4
- ~1
- ~8
- ~4

- ~6 ozs
- ~350
- ~17
- ~3
- ~3
- ~3
- ~3
- 0

- ~3 ozs
- ~350
- ~27
- ~18
- ~0
- ~21
- 0
### Protein

<table>
<thead>
<tr>
<th>Amount</th>
<th>Calories</th>
<th>Protein (g)</th>
<th>Fat (g)</th>
<th>Sat. Fat (g)</th>
<th>Omega-3 (g)</th>
<th>Fiber (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>~1 cup</td>
<td>~250</td>
<td>~24</td>
<td>~14</td>
<td>~2</td>
<td>&lt;1</td>
<td>~1</td>
</tr>
<tr>
<td>~4 ozs</td>
<td>~250</td>
<td>~31</td>
<td>~12</td>
<td>~2</td>
<td>~2</td>
<td>0</td>
</tr>
<tr>
<td>~3-1/2</td>
<td>~250</td>
<td>~20</td>
<td>~17</td>
<td>~5</td>
<td>~17</td>
<td>0</td>
</tr>
<tr>
<td>~3 ozs</td>
<td>~250</td>
<td>~18</td>
<td>~18</td>
<td>~7</td>
<td>~7</td>
<td>0</td>
</tr>
</tbody>
</table>

### Carbohydrates

<table>
<thead>
<tr>
<th>Amount</th>
<th>Calories</th>
<th>Carbs (g)</th>
<th>Protein (g)</th>
<th>Fat (g)</th>
<th>Sat. Fat (g)</th>
<th>Fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td>~1/2 cup</td>
<td>~125</td>
<td>~26</td>
<td>~3</td>
<td>~1</td>
<td>&lt;1</td>
<td>~2 g</td>
</tr>
<tr>
<td>~1 slice</td>
<td>~125</td>
<td>~20</td>
<td>~5</td>
<td>~2</td>
<td>&lt;1</td>
<td>~4 g</td>
</tr>
<tr>
<td>~4 ozs</td>
<td>~125</td>
<td>~28</td>
<td>~4</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>~8 g</td>
</tr>
<tr>
<td>~2-1/2c</td>
<td>~125</td>
<td>~20</td>
<td>~15</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td>~8 g</td>
</tr>
<tr>
<td>~1/2 cup</td>
<td>~125</td>
<td>~7.5</td>
<td>~12</td>
<td>~7</td>
<td>&lt;1</td>
<td>~4 g</td>
</tr>
</tbody>
</table>

### The USDA Food Guide Pyramid

- **Carbohydrates**: Eliminate foods rich in refined/added sugar.
- Less sugar
- More fiber
- More filling (bigger portion)
- Lower Energy Density

**CARBOHYDRATES:** High fiber, low glycemic index, complex, bulky, high-water content

**FATS:** Mono- & polyunsaturated, omega-3

**PROTEIN:** Marine (with omega-3), plant (with fiber), lean animal (low in saturated fat)

**Portion size and Energy Density**

N=24 young women, provided with meals and snacks for 2 days, ad libitum. Cross-over study. No significant differences in ratings of hunger of fullness.

Rolls et al., Am J Clin Nutr 2006;83:11-7

**Ongoing Research Studies**

- Antioxidant Study
- Omega-3 Study
- UPBEAT Study
Ongoing Research Studies

- Antioxidant Study
  - [http://nutrition.stanford.edu/](http://nutrition.stanford.edu/)
- Omega-3 Study
- UPBEAT Study